

**REMARKS**

This submission is in reply to the non-final Office Action mailed September 1, 2009. In view of the amendments above and the remarks below, reconsideration is respectfully requested. Prior to the amendments above, Claims 1-7 were pending in the subject application. By the amendments above, Claims 1, 2, 5, and 7 have been amended to more particularly point out and distinctly define the subject matter regarded as inventive. Claims 8-13 have been added. The Specification has been amended to include section headings, and the Abstract has been amended to address informalities. No new matter has been added by these amendments, as support for the amendments can be found throughout the application as filed. See, e.g., Page 4, line 24 through Page 5, line 8; Page 5, lines 10-22; and the Drawing.

**Specification**

The Examiner requested cooperation in correcting any errors of which Applicant may become aware of in the Specification. However, the Examiner did not raise any specific objections to the Specification.

The Examiner objected to the disclosure because the reference to a brief description of the drawings was not provided. By the amendments above, section headings have been added to the specification accordingly, including a heading for the Brief Description of the Drawing.

It is respectfully submitted that the amendments to the Specification have obviated the objection to the disclosure. Withdrawal of the objection is requested.

### **Abstract**

The Examiner indicated that the application does not contain an abstract on a separate sheet. It is respectfully pointed out that the Abstract was included on a separate page with the application as filed, which separate page was submitted in addition to the abstract included with the copy of the PCT publication submitted. This has been verified by review of the application papers available in Private PAIR. The Abstract has been amended above to be in single paragraph form. While the Examiner did not specifically state an objection to the Abstract, it is respectfully submitted that the Abstract as amended is in proper order and acknowledgement of the same is respectfully requested.

### **Objections to the Drawings**

The drawings were objected to for not showing every feature recited in the claims. In particular, the Examiner indicated that the drier recited in Claim 5 must be shown or the feature(s) canceled from the claims. The objection is respectfully traversed. By the amendments above, Claim 5 has been amended to recite a delivery pump arranged at a point in the *process steam route from a drier*. A process steam route from a drier is shown in the drawing at 31, as described at Page 4, lines 24-32 of the application as filed, for example. In other words, the drier is not being claimed, rather the claims recite a route from a drier, which is shown in the drawing.

The Examiner also objected to the drawing because reference characters “23” and “49” are both used to designate “delivery pump”. The Examiner has cited to 37 C.F.R. § 1.84(p)(4), however it is submitted that the rule has been misconstrued. 37 C.F.R. § 1.84(p)(4) states, “The same part of an invention appearing in more than one view of a the drawing must always be designated by the same reference character,”. This portion of the rule is inapplicable to the subject

application, since only one view is provided in the drawing. The rule goes on as follows, “and the same reference character must never be used to designate different parts.” This means that there may be a problem if one reference character was *repeated* for two different parts. In this case, the drawing is in compliance with 37 C.F.R. § 1.84(p)(4), since two different delivery pumps are each given a separate reference character, i.e. delivery pump 23 and delivery pump 49 are two different delivery pumps with two different reference characters.

In view of the foregoing, it is respectfully submitted that the objections to the drawing have been overcome without the need for a replacement drawing. Withdrawal of the objections to the drawing is requested.

#### **Rejections Under 35 U.S.C. § 112**

Claims 1-7 were rejected under 35 U.S.C. § 112, second paragraph, for indefiniteness. The Examiner indicated that the structural limitations of the apparatus claims were difficult to determine. Claims 1 and 5 have been amended to clarify accordingly.

In particular, the Examiner indicated that it was unclear what was meant by a “..pump in the form of a fan..”. The rejection is respectfully traversed. Nonetheless, in the interest of advancing prosecution, Claim 5 has been amended above to remove the “in the form of a fan” language.

The Examiner indicated that there was insufficient antecedent basis for “the drier” recited in Claim 5. By the amendments above, Claim 5 has been amended to address the antecedent basis issue. In particular, “the drier” has been amended to read “a drier”.

The Examiner indicated that the phrase “in particular” in Claim 1 and Claim 5 did not ascertain the claimed invention with precision. It is respectfully pointed out that the phrase “in

particular” was previously deleted from Claim 1 in the preliminary amendment filed November 26, 2008. The phrase has also been deleted from Claim 5 by the amendments above.

In view of the foregoing remarks, it is respectfully submitted that the rejections under 35 U.S.C. § 112, second paragraph have been overcome. Withdrawal of the rejections is requested accordingly.

### **Rejections Under 35 U.S.C. § 103**

Claims 1-7 were rejected under 35 U.S.C. § 103(a) over German Patent No. DE 2632910 to Brand, et al., (hereinafter Brand) or U.S. Patent No. 4,437,316 to Dyer, et al., (hereinafter Dyer).

Brand discloses a multistage evaporation system. Fig. 2 shows a split type evaporator 42, 43, 44 having two evaporator heating devices 42, 43 connected to a common separator 44. The heating device 42 is heated by fresh steam (as opposed to process waste steam) through line 50. The second heating device 43 is heated by product vapors from separator 44 via mechanical compressor 53. Since separator 44 is common to both the heating device 42 and the heating device 43, the mechanical compressor 53 only compresses a part of the product vapors, the rest is supplied to the heating device 24 of a second stage evaporator without being compressed by compressor 53.

Dyer discloses an evaporation system including a first evaporator 292 and a vapor compression stage 312, 346. The vapor compression stage is connected to a product vapor exit of the first evaporator and supplies compressed vapor to a second evaporator 270 to heat the second evaporator.

In contrast to Brand and Dyer, amended Claim 1 recites an evaporation system in a processing plant processing a product and supplying process waste steam. The system includes an

evaporator for concentrating the product at a given dew point temperature. The evaporator has an exit for product vapor and is configured to be heated by process waste steam supplied by the processing plant. A process stage is adapted to be heated to a defined temperature by product vapors of the evaporator. A vapor compression stage is connected to the product vapor exit of the evaporator and to the process stage. The vapor compression stage is adapted to lower the given dew point temperature of the evaporator below the defined temperature required for heating the process stage and to raise the temperature of the product vapor to the defined temperature by compressing the product vapor.

It is respectfully submitted that Brand and Dyer, whether considered alone or in combination, do not teach, suggest, or disclose each and every element recited in amended Claim 1. In particular, neither of Brand and Dyer discloses a vapor compression stage connected to a product vapor exit of the evaporator and adapted to lower the given dew point temperature of the evaporator below the defined temperature required for heating the process stage and to raise the temperature of the product vapor to the defined temperature, as recited in amended Claim 1. Instead, in Brand since the separator 44 is common to both the heating device 42 and the heating device 43, the mechanical compressor 53 only compresses a part of the product vapors and the rest is supplied to the heating device 24 of a second stage evaporator. Simply put, mechanical compressor 53 is not positioned to lower the dew point of the first evaporator or heating device 42 to a temperature below the heating temperature of the heating device 24, since it can be readily bypassed through line 40. *See* Brand, Fig. 2. Dyer does not discuss lowering the dew point temperature of the first evaporator my means of a compression stage below the temperature necessary for heating the second evaporator.

Since Brand and Dyer, considered alone or in combination, do not teach, suggest, or disclose each and every element recited in amended Claim 1, Brand and Dyer do not anticipate or render amended Claim 1 obvious under 35 U.S.C. § 103(a). Claims 2-13 depend from amended Claim 1 and therefore include all of the elements recited therein. Therefore, for at least the same reasons provided above with respect to amended Claim 1, Brand and Dyer do not anticipate or render Claims 2-13 obvious under 35 U.S.C. § 103(a).

Based on the foregoing remarks, it is respectfully submitted that the rejections of Claims 1-7 under 35 U.S.C. § 103(a) have been overcome. Withdrawal of the rejections is requested accordingly.

**CONCLUSION**

In view of the amendments and remarks above, it is respectfully submitted that the rejections and objections have been overcome. It is submitted that this response is timely filed and is fully responsive. It is respectfully requested that a Notice of Allowance be issued at the Examiner's earliest opportunity. If the Examiner believes any outstanding issues can be resolved by telephone, it is requested that Applicant's representatives be contacted at the number provided below.

It is believed that there are no fees due in connection with this submission. The Director is hereby authorized to charge any deficiency or credit any overpayment in the fees to our Deposit Account No. 04-1105 under Order No. 65736(49338).

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Respectfully submitted,

By 

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